

WHAT IS CLAIMED IS:

1. A solderability testing apparatus comprising:
a sample parts holding means having a sample parts holding member for holding a sample;
5 an external force detection means for supporting said sample parts holding means;
a solder paste container for containing a solder paste which is internally added with a flux; and
a heating means for heating the solder paste;
10 wherein said apparatus has a flux wetting preventive layer at least on the surface of a sample holding portion of the sample parts holding member.
2. The solderability testing apparatus as claimed in Claim 1,
15 wherein a material composing the flux wetting preventive layer has a contact angle θ to flux of larger than 90° .
3. The solderability testing apparatus as claimed in Claim 2,
wherein the material composing the flux wetting preventive
20 layer is a fluorocarbon resin.
4. The solderability testing apparatus as claimed in Claim 2,
wherein the material composing the flux wetting preventive layer is cermet or ceramic.
- 25 5. A solderability testing apparatus comprising:
a sample parts holding means having a sample parts holding member for holding a sample;
an external force detection means for supporting said
30 sample parts holding means;
a solder paste container for containing a solder paste which is internally added with a flux; and

a heating means for heating the solder paste;

wherein at least a sample holding portion of the sample parts holding member is made of a material having a poor wetting balance in respect of the flux.

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6. The solderability testing apparatus as claimed in Claim 5, wherein a material composing the sample holding portion of the sample parts holding member has a contact angle θ to flux of larger than 90° .

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7. The solderability testing apparatus as claimed in Claim 6, wherein the material composing the flux wetting preventive layer is a fluorocarbon resin.

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8. The solderability testing apparatus as claimed in Claim 6, wherein the material composing the flux wetting preventive layer is cermet or ceramic.

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9. A solderability testing method using a solderability testing apparatus, said apparatus comprising:

a sample parts holding means having a sample parts holding member for holding a sample;

an external force detection means for supporting said sample parts holding means;

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a solder paste container for containing a solder paste which is internally added with a flux; and

a heating means for heating the solder paste;

said apparatus having a flux wetting preventive layer at least on the surface of a sample holding portion of the sample parts holding member;

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wherein said method comprises a step of heating and melting the solder paste using a heating means while keeping a

part of a sample, which is held by a sample parts holding member, being dipped therein, and measuring time-dependent changes in the acting force effected between the molten solder paste and the sample using the external force detection means.

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10. The solderability testing method as claimed in Claim 9, wherein a material composing the flux wetting preventive layer has a contact angle θ to flux of larger than 90° .

10 11. The solderability testing method as claimed in Claim 10, wherein the material composing the flux wetting preventive layer is a fluorocarbon resin.

12. The solderability testing method as claimed in Claim 10, wherein the material composing the flux wetting preventive layer is cermet or ceramic.

13. A solderability testing method using a solderability testing apparatus, which apparatus comprising:

20 a sample parts holding means having a sample parts holding member for holding a sample;

an external force detection means for supporting said sample parts holding means;

25 a solder paste container for containing a solder paste which is internally added with a flux; and

a heating means for heating the solder paste;

said apparatus having a flux wetting preventive layer at least on the surface of a sample holding portion of the sample parts holding member;

30 said sample parts holding member having a sample holding portion which is made of a material having a poor wetting balance in respect of the flux,

wherein said method comprises a step of heating and melting the solder paste using a heating means while keeping a part of a sample, which is held by a sample parts holding member, being dipped therein, and measuring time-dependent changes in
5 the acting force effected between the molten solder paste and the sample using the external force detection means.

14. The solderability testing method as claimed in Claim 13,
wherein a material composing the sample holding portion of
10 the sample parts holding member has a contact angle θ to flux of larger than 90° .

15. The solderability testing method as claimed in Claim 14,
wherein the material composing the flux wetting preventive
15 layer is a fluorocarbon resin.

16. The solderability testing method as claimed in Claim 14,
wherein the material composing the flux wetting preventive
layer is cermet or ceramic.

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